In the Claims:

1. – 221. (Canceled).

222. (New) A method of forming a microlens, comprising providing a doped glass having at least one metallic component other than copper, and locally irradiating said doped glass by a continuous wave laser beam, so as to melt a portion of said doped glass, thereby to form the microlens.

223. (New) The method of claim 222, wherein said at least one metallic component is selected from the group consisting of silver, gold, nickel, ferrum, cerium, and platinum.

224. (New) The method of claim 222, wherein said at least one metallic component forms at least one diffusion layer of metallic nanoclusters.

225. (New) The method of claim 222, wherein said at least one metallic component forms a bulk in said doped glass.

226. (New) The method of claim 224, wherein a diffusion depth of said at least one diffusion layer is from about 3 micrometers to about 100 micrometers.

227. (New) The method of claim 222, wherein said doped glass is characterized by a predetermined optical absorption spectrum.

228. (New) The method of claim 222, wherein at least one of an exposure duration, a power, an impinging angle, a polarization, a divergence and an intensity distribution of said irradiation is selected so as to provide the microlens with at least one predetermined characteristic selected from the group consisting of radius, height, prismatic properties and focal length.

229. (New) The method of claim 228, wherein said radius of the microlens is from about 0.7 micrometer to about 100 micrometers.

230. (New) The method of claim 228, wherein said height of the microlens is from about 0.07 micrometer to about 10 micrometers.

231. (New) The method of claim 222, wherein at least one of an exposure duration, a power, an impinging angle, a polarization, a divergence and an intensity distribution of said irradiation is selected such that the microlens is transparent to light having a wavelength from about 350 nanometers to about 2 micrometers.

232. (New) The method of claim 222, wherein at least one of an exposure duration, a power, an impinging angle, a polarization, a divergence and an intensity distribution of said irradiation is selected so that the microlens is transparent to visible light.

233. (New) The method of claim 222, wherein at least one of an exposure duration, a power, an impinging angle, a polarization, a divergence and an intensity distribution of said irradiation is selected so that the microlens is transparent to infrared light.

234. (New) The method of claim 227, wherein said predetermined optical absorption spectrum is such that said doped glass absorbs laser radiation having sufficiently small wavelength.

235. (New) The method of claim 222, further comprising focusing said laser beam.

236. (New) The method of claim 235, wherein said focusing is by an optical element selected from the group consisting of a microscope objective lens, a GRIN lens and a diffraction lens.

237. (New) The method of claim 235, wherein said focusing is performed so as to control at least one of a shape and size, a transparency and prismatic properties of the microlens.

238. (New) The method of claim 222, wherein an effective radius of said laser beam, prior to impinging on said doped glass, is in a micrometer scale.

239. (New) The method of claim 222, wherein a duration of said irradiation is from about 0.1 millisecond to about 10 seconds.

240. (New) A method of forming a microlens array, comprising:

(a) providing a doped glass having at least one metallic component other than copper;

(b) selecting a plurality of locations on said doped glass; and

(c) at each location of said plurality of locations, irradiating said doped glass by a continuous wave laser beam, so as to melt a portion of said doped glass, thereby to form a microlens at said location;

thereby forming a microlens array.

241. (New) A microlens formed in a doped glass having at least one metallic component other than copper, the microlens being formed in said doped glass by local radiation of a continuous wave laser beam, selected so as to melt a portion of said doped glass, thereby to form the microlens.

242. (New) The microlens of claim 241, wherein said at least one metallic component forms a plurality of crystallites surrounding the microlens.

243. (New) A microlens formed in a doped glass having at least one metallic component other than copper, the microlens is transparent to light having a wavelength from about 350 nanometers to about 2 micrometers.

244. (New) A microlens array, comprising a plurality of microlenses formed in a doped glass having at least one metallic component other than copper, wherein each of said plurality of microlenses of the microlens array is transparent to light having a wavelength from about 350 nanometers to about 2 micrometers.

245. (New) The microlens array of claim 244, wherein said at least one metallic component forms a plurality of crystallites surrounding at least a portion of said plurality of microlenses.

246. (New) An optical device having at least one microlens array, the microlens array comprising a plurality of microlenses formed in a doped glass having at least one metallic component other than copper, wherein each of said plurality of microlenses of the microlens array is transparent to light having a wavelength from about 350 nanometers to about 2 micrometers.

247. (New) The optical device of claim 246, selected from the group consisting of an imaging device, a microscope, a confocal microscope, a telescope, a magnifying device, an optical interconnecting unit, a telecommunications device, a micro-optical device, an integrated optical circuit, a display device, a multi LCD projection device, a single LCD projection device, a LED based display device, an integral photography device, a retroreflector array, a surface characterization device, and a wavefront sensing device.

248. (New) A method of forming a microlens, comprising:

(a) doping a glass with at least one metallic component other than copper, thereby providing a doped glass; and

(b) locally irradiating said doped glass by a continuous wave laser beam, so as to melt a portion of said doped glass, thereby to form the microlens.

249. (New) The method of claim 248, wherein said doping said glass with said at least one metallic component comprises:

(i) exchanging ions of said glass with ions of said at least one metallic component; and

(ii) generating conditions for growth of metallic nanoclusters of said at least one metallic component, thereby providing at least one diffusion layer of metallic nanoclusters.

250. (New) The method of claim 248, wherein said doping said glass with said at least one metallic component comprises:

(i) providing a molten environment and mixing said at least one metallic component therein, so as to provide a mixed molten environment; and

(ii) cooling said mixed molten environment so as to form a glass having a bulk of said at least one metallic component doped therein.

251. (New) The method of claim 250, wherein said glass melt comprises at least one component selected from the group consisting of powdered silica, sodium carbonate, lithium carbonate, boron oxide, zirconium oxide, cerium oxide, aluminum oxide and arsenic oxide.

252. (New) The method of claim 249, wherein said ions of said glass are alkali ions.

253. (New) The method of claim 249, wherein said ions of said glass are selected from the group consisting of sodium ions, lithium ions, rubidium ions, cesium ions and potassium ions.

254. (New) The method of claim 249, wherein said exchanging ions of said glass with ions of said at least one metallic component is by positioning said glass in a molted environment comprising a mix alkaline and the at least one metallic component.

255. (New) The method of claim 254, wherein said molted environment comprising at least one combination selected from the group consisting of $AgNO_3$, $AgNO_3$ and $NaNO_3$, $AgNO_3$ and KNO_3, $AgNO_3$ and ($NaNO_3$+KNO_3).

256. (New) The method of claim 249, further comprising exchanging ions of said glass with ions present in a molted salt containing alkaline ions.

257. (New) The method of claim 254, wherein said molted environment comprises about 5 parts of said $AgNO_3$ and about 95 parts of said $NaNO_3$.

258. (New) The method of claim 248, wherein said doping said glass is done so as that a concentration of said at least one metallic component within a predetermined region of said doped glass is at least 5 percent by weight.

259. (New) The method of claim 249, wherein said generating said conditions for said growth of said metallic nanoclusters is by annealing said doped glass in Hydrogen atmosphere.

260. (New) The method of claim 248, wherein said doping said glass is characterized by a dopant type, a dopant concentration level, a doping time and a doping temperature, and further wherein at least one of said dopant type, said dopant concentration level, said doping time and said doping temperature is selected so as to provide said doped glass with a predetermined optical absorption spectrum.

261. (New) A method of forming at least one microlens on a doped glass having at least one metallic component other than copper, the method comprising:

(a) selecting a shape and size for the microlens;

(b) using physical characteristics of the doped glass for calculating at least one laser beam parameter, said at least one laser beam parameter being suitable for providing said shape and size of the at least one microlens; and

(c) locally irradiating the doped glass by a continuous wave laser beam having said at least one laser beam parameter, so as to melt a portion of the doped glass, thereby to form the at least one microlens.

262. (New) The method of claim 261, further comprising repeating said step (c) a plurality of times, each time in a different location on the doped glass, to form a microlens array.

263. (New) The method of claim 261, wherein said calculating said at least one laser beam parameter comprises calculating a temperature distribution of the doped glass and using said temperature distribution for calculating said at least one laser beam parameter.

264. (New) The method of claim 263, wherein said calculating said temperature distribution comprises solving a heat diffusion equation.

265. (New) The method of claim 264, wherein said heat diffusion equation is a non-linear heat diffusion equation, being characterized by a non-linear term.

266. (New) The method of claim 265, wherein said non-linear term comprises a temperature dependent thermal diffusivity.

267. (New) The method of claim 266, further comprising performing a linearization procedure on said non-linear heat diffusion equation, thereby constructing a linear differential equation.

268. (New) The method of claim 263, wherein said calculating said at least one laser beam parameter comprises generating a graphical representation of said temperature distribution, and detecting portions of said graphical representation corresponding to a formation of the at least one microlens.

269. (New) The method of claim 268, wherein said graphical representation comprises a plurality of isotherms.

270. (New) The method of claim 269, wherein said portions of said graphical representation comprises at least one isotherm of said plurality of isotherms.

271. (New) A method of forming at least one microlens having a predetermined shape and size, comprising:

(a) doping a glass with at least one metallic component other than copper, thereby providing a doped glass;

(b) using physical characteristics of said doped glass for calculating at least one laser beam parameter, said at least one laser beam parameter being suitable for providing the predetermined shape and size of the at least one microlens; and

(c) locally irradiating said doped glass by a continuous wave laser beam having said at least one laser beam parameter, so as to melt a portion of the doped glass, thereby to form the at least one microlens.